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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,834	12/13/2001	Hang Zhang	7000-105	1048
27820	7590	03/14/2006	EXAMINER	
WITHROW & TERRANOVA, P.L.L.C. P.O. BOX 1287 CARY, NC 27512			HALIYUR, VENKATESH N	
			ART UNIT	PAPER NUMBER
			2664	

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/020,834	ZHANG ET AL.	
	Examiner	Art Unit	
	Venkatesh Haliyur	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The indicated allowability of claims 6,15,24 in first office action of 8/22/2005 and final office action of 1/13/2006 are withdrawn in view of the newly discovered reference(s) to Cheng et al. Rejections based on the newly cited reference(s) Cheng et al. follows.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Cheng et al [US Pub: 2002/0191544].

Regarding claims 1,10,19, Cheng et al. disclosed in their invention of "Method and System for Interlayer Control Between Re-Sequencing and Retransmission Entities" for retransmission of frames when a failed attempt to transmit a frame at a physical layer of a receiver was detected (**identifies missing PDU**) and sending a message to link control layer (**RLP**) of the receiver to indicate the failed attempt to transmit a frame has been detected (**Para 0043**), and upon receipt of the message, sending a retransmission message (**retransmission request**) from the link control layer

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(Para 0015-0019,0043) of the receiver to sender to retransmit data associated with the frame **[Figs 1-3, Para 0015-0059]**.

Regarding claim 2, Cheng et al. disclosed a method for the receiver to determine if a frame has been received in error **(performs CRC for PDU/ frames)** or lost **(missing PDU)** during the transmission **[Para 0015-0021]**.

Regarding claim 3,12,21, Cheng et al. also disclosed link control layer implementing RLP for a data channel to carry information frames pertaining to that channel **[Fig 1, Para 0020-0033]**.

Regarding claims 4,13,22, Cheng et al. disclosed that the frame is a physical layer frame encapsulating data represented by an RLP frame and the sending step further comprises generating the retransmission message to include identification **(sequence number, size and type of PDU/SDU Para 0018)** of a recently received data **(PDU)** such that the sender can identify data **(PDU)** **[Para 0015-0022,0047-0057]**.

Regarding claims 5,14,23, Cheng et al. disclosed that the frame is a physical layer frame **(PDU)**, the method for receiving the retransmission message at a link control layer **(RLP)** of the sender and determining data **(PDU)** to retransmit and retransmitting the data requiring retransmission **[Fig 3, Para 0031-0043,0047-0057]**.

Regarding claims 6,15,24, Cheng et al. disclosed that the message is a primitive indication **(early notification)** of a failed attempt to receive frames in the physical layer **[Para 0031-0039]**.

Regarding claims 7,16,25, Cheng et al. disclosed the retransmission message is an acknowledgement message **[Para 0042]**.

Regarding claims 8,17,26, Cheng et al. disclosed the frame is a physical layer frame the method of sending link control layer frames from the sender over a wireless communication channel to the receiver via physical layer frames from the sender and setting a timer (**transmission time interval timer**) upon transmitting each of the link control layer frames from the sender and resetting the timer upon confirmation the link control layer frames were received or a subsequent link control layer frame is sent [Para 0011,0033-0057].

Regarding claims 9,18,27, Cheng et al. disclosed timer (**transmission time interval timer**) for one of the link control layer frames expires, sending a request message to the link control layer of the receiver from the sender requesting identification of a last portion of data and a link control layer frame associated with the timer expiration [Para 0033-0057].

Regarding claim 11,20, Cheng et al. disclosed that the physical layer receives at least a portion of the frame (**missing packet or PDU**) and determines at least a portion of the data associated with the frame (**residual frame error rate**) is either unrecoverable [Para 0032].

Response to Amendment

4. Applicant's amendment, see Remarks, filed on 2/21/2006, with respect to the rejection(s) of claim(s) 1-3,5 under 35 USC 102(e) and rejection(s) of claims 4, 7-14,16-23 and 25-27 under 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Cheng et al.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chang et al. (US- 6,89,5010) "Apparatus and Method for Transmitting and Receiving Data According to Radio Link Protocol in a Mobile Communications Systems"

Lee et al. (US- 6718,500) "RLP Communication Device and Method for Mobile Communication System"

Fong et al. (US- 6,760,860) "Automatic Retransmission Request Layer Interaction in a Wireless Network"

Cheng (6,189,122) "Method and Apparatus for Controlling a Retransmission/Abort timer in a Telecommunications System"

Cheng et al. (US-2002/0191544) "Method and System for Interlayer Control Between Re-Sequencing and Retransmission Entities"

Hunzinger et al. (US-2002/0172192) "ARQ Parameter Retransmission Control For Variable Data Rate Channels"

6. Any inquiry concerning this communication or earlier communications should be directed to the attention to Venkatesh Haliyur whose phone number is 571-272-8616. The examiner can normally be reached on Monday-Friday from 9:00AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached @ (571)-272-3139. Any inquiry of a general

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nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (571)-272-2600 or fax to 571-273-8300.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

Venkatesh Haliyur

Patent Examiner

Wh
03/09/06

Ricky Q. Ngo
RICKY Q. NGO
ASSISTANT PATENT EXAMINER